

6 Rules of Use

1. **1st test** – done ‘long way’ to validate software
2. **Validation** – if valid, software can then be used
3. **Invalidation** – what to do next
4. **Green lights** – basis for ending tests
5. **Red lights** – what to do next
6. **Documentation** – requirements

Rule 1

In floating drilling operations, the 1st high-pressure test of any BOP equipment **testing sequence**¹ shall be interpreted by chart recorder method. Digital BOP Testing software may be run concurrently to **demonstrate validation**².

¹ A **testing sequence** constitutes (a) a series of high-pressure subsea BOP tests only, or (b) a series of high-pressure surface manifold tests only, or (c) high-pressure tests commenced more than 4 hours since the previous fully qualified high-pressure test.

² **Demonstrate validation** means the test lasts sufficiently long to (a) obtain both a chart recorder interpretation and a software interpretation (i.e., green light or red light) and (b) the 1st-light Digital Testing pressure forecast is proven to be within acceptable bounds of the actual pressure result.

Rule 2

If during a testing sequence Digital BOP Testing software demonstrates validation, then it may be used to interpret subsequent tests *in that testing sequence*³.

³ *In that testing sequence* means if the equipment being tested changes from subsurface BOP to surface manifold or vice versa, then by definition the next high-pressure test begins a new testing sequence and must be interpreted according to Rule No. 1.

Rule 3

If during any test the Digital BOP Testing 1st-light pressure forecast is invalid, then

(a) the current test should be interpreted per chart recorder method and the next test must be interpreted by chart recorder method with the option of once again running Digital BOP Testing software concurrently to demonstrate validation (per Rule 2), or

(b) the current test can either be “pumped-up” or ended, then repeated, with the option of once again running Digital BOP Testing software concurrently to demonstrate validation (per Rule 2).

Rule 4

During tests for which it is permissible to use Digital BOP Testing software as the primary interpretation method, it will be permissible to end tests and interpret them as POSITIVE when, and only when, the software displays a green “light”.

In the absence of a definitive software interpretation, i.e., the software displays a yellow "light", it will be permissible to remain shut-in until a definitive interpretation is made via chart recorder, and declare the chart recorder result as definitive irrespective of the Digital BOP Testing software result.

Rule 5

If, during tests for which it is permissible to use Digital BOP Testing software as the primary interpretation method, a red “light” is displayed, it will be permissible to either

(a) remain shut-in then if the interpretation changes to POSITIVE it will be permissible to interpret the test as POSITIVE and end it (per Rule 4), or

(b) “pump up” the pressure and interpret the new pressure decline via Digital BOP Testing software, or

(c) repeat the test by releasing then reapplying pressure to the same components and interpret the new pressure decline via Digital BOP Testing software, or

(d) remain shut-in until a definitive interpretation is made via chart recorder, and declare the chart recorder result as definitive irrespective of the Digital BOP Testing software result.

Rule 6

All test results shall be documented and filed for inspection via traditional charts in combination with Digital BOP Testing software-generated reports.

Software-generated reports shall document the valid or invalid status of Digital BOP Testing 1st-light pressure forecasts, and indicate the Digital BOP Testing software interpretation of each test.

The same personnel responsible for approving chart recorder test records are responsible for approving Digital BOP Testing records.

The Six Rules

